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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,028	07/29/2003	Ge Yi	S01.12-0988/STL 11281.00	7629
27365	7590	07/21/2005	EXAMINER TUGBANG, ANTHONY D	
SEAGATE TECHNOLOGY LLC C/O WESTMAN CHAMPLIN & KELLY, P.A. SUITE 1400 - INTERNATIONAL CENTRE 900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402-3319			ART UNIT 3729	
PAPER NUMBER				

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

7/2/05

Office Action Summary	Application No. 10/629,028	Applicant(s) YI ET AL	
	Examiner A. Dexter Tugbang	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 19-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-8, 19-36 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Due to the added new Claims 31-36 (in the amendment filed on 5/5/05), the previous restriction requirement (dated 3/30/05) has been withdrawn in view of the following. Any delay in prosecution is deeply regretted.

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-8, 19-24 and 31-36, drawn to a process of forming a magnetoresistive sensor, classified in class 29, subclass 603.07.
- II. Claims 25-30, drawn to a constrictor junction, classified in class 360, subclass 322.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions of Groups I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product of Group II can be made by a materially different method, such as one that forms the outer shell portion of the junction by coating techniques with predetermined settings of magnetic and electrical conductivity and without the need for any reducing of the magnetic and electrical conductivity or without the need for any ion implantation, as required by Group I.

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4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. If applicant(s) elect the invention of Group I, then a further restriction to one of the following inventions is required under 35 U.S.C. 121:

- I-A. Claims 2 and 20, drawn to forming coplanar first and second magnetic leads, classified in class 29, subclass 603.07.
- I-B. Claim 3, drawn to forming a single layer of magnetic and electrically conductive material and forming the first and second magnetic leads and the junction from the single layer, classified in class 29, subclass 603.13.
- I-C. Claims 4-6 and 21-23, drawn to forming the junction core to a length defined by a distance separating the first and second magnetic leads and a width that is perpendicular to the length, classified in class 29, subclass 842.
- I-D. Claims 7, 8, 24 and 31-36, drawn to ion implanting an outer shell portion of the junction, classified in class 204, subclass 192.11.

The inventions are distinct, each from the other because of the following reasons:

6. Inventions of Groups I-A through I-D are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, each of the inventions above have separate utility, or a separately usable process by itself. For example, Group I-A has a separately usable process of forming coplanar first and second magnetic leads that is not required in any of Groups I-B through I-D. See MPEP § 806.05(d).

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7. Because these inventions are distinct for the reasons given above and the search required for each of Groups I-B through I-D is not required for Group I-A, restriction for examination purposes as indicated is proper.

8. Claims 1 and 19 link(s) the inventions of Groups I-A through I-D. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim(s), Claims 1 and 19. Upon the allowance of the linking claim(s), the restriction requirement as to the linked inventions shall be withdrawn and any claim(s) depending from or otherwise including all the limitations of the allowable linking claim(s) will be entitled to examination in the instant application. Applicant(s) are advised that if any such claim(s) depending from or including all the limitations of the allowable linking claim(s) is/are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

9. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

10. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

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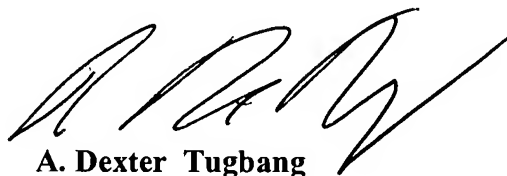
application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570.

The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



A. Dexter Tugbang
Primary Examiner
Art Unit 3729

July 19, 2005